

In the Claims

Please amend claims 1-4 and 6-8, such that the claims read as follows:

1. (Currently Amended) An apparatus for detecting substrates, comprising:

    a transmitter/receiver unit adapted to transmit a light beam through a substrate located within a transfer chamber;

    a reflector adapted to receive the light beam transmitted from the transmitter/receiver unit and to reflect the transmitted light beam toward the transmitter/receiver unit; and

    a controller coupled to the transmitter/receiver unit and adapted to determine whether a the substrate is positioned between the transmitter/receiver unit and the reflector based on an intensity of the reflected light beam received by the transmitter/receiver unit;

    wherein at least one of the transmitted and reflected light beams is adapted to strike a the substrate positioned between the transmitter/receiver unit and the reflector with non-normal incidence.

2. (Currently Amended) The apparatus of claim 1 wherein the transmitter/receiver unit and the reflector are both angled relative to a path of a the substrate that travels through the transfer chamber so that both the transmitted and reflected light beams strike the substrate with non-normal incidence.

3. (Currently Amended) The apparatus of claim 1 wherein the transmitted and reflected light beams are adapted to

strike a the substrate positioned between the transmitter/receiver unit and the reflector at an angle of between about 2 to 6 degrees from normal incidence.

4. (Currently Amended) The apparatus of claim 3 wherein the transmitted and reflected light beams are adapted to strike a the substrate positioned between the transmitter/receiver unit and the reflector at an angle of about 3.8 degrees from normal incidence.

5. (Original) The apparatus of claim 1 wherein the transmitted and reflected light beams are approximately parallel.

6. (Currently Amended) The apparatus of claim 1 further comprising a plurality of transmitter/receiver unit and reflector pairs, each having transmitted and reflected light beams adapted to strike a the substrate positioned between the transmitter/receiver unit and reflector pair with non-normal incidence.

7. (Currently Amended) An apparatus for detecting substrates, comprising:

    a transfer chamber adapted to couple to at least one processing chamber and at least one load lock chamber;

    a transmitter/receiver unit adapted to transmit a light beam through a substrate located within the transfer chamber;

    a reflector adapted to receive the light beam transmitted from the transmitter/receiver unit and to reflect the transmitted light beam toward the transmitter/receiver unit; and

a controller coupled to the transmitter/receiver unit and adapted to determine whether ~~a~~ the substrate is positioned between the transmitter/receiver unit and the reflector based on an intensity of the reflected light beam received by the transmitter/receiver unit;

wherein both the transmitted and reflected light beams are adapted to strike ~~a~~ the substrate positioned between the transmitter/receiver unit and the reflector with non-normal incidence.

8. (Currently Amended) The apparatus of claim 7 wherein the transmitter/receiver unit and the reflector are both angled relative to a path of ~~a~~ the substrate that travels through the transfer chamber so that both the transmitted and reflected light beams strike the substrate with non-normal incidence.

9. (Original) A method of detecting a substrate within a chamber comprising:

transmitting a light beam through the substrate;

reflecting the light beam back through the substrate;

detecting an intensity of the reflected light beam; and

determining whether the substrate is located within the chamber based on the intensity of the reflected light beam;

wherein at least one of the transmitted and reflected light beams strikes the substrate with non-normal incidence.

10. (Original) The method of claim 9 wherein the transmitted and reflected light beams are approximately parallel.

11. (Original) A method of detecting a substrate within a chamber comprising:

transmitting a light beam through the substrate with non-normal incidence;

reflecting the light beam back through the substrate with non-normal incidence;

detecting an intensity of the reflected light beam; and

determining whether the substrate is located within the chamber based on the intensity of the reflected light beam.

12. (Original) The method of claim 11 wherein the transmitted and reflected light beams strike the substrate at an angle of between about 2 to 6 degrees from normal incidence.

13. (Original) The method of claim 12 wherein the transmitted and reflected light beams strike the substrate at an angle of about 3.8 degrees from normal incidence.

14. (Original) The method of claim 11 wherein the transmitted and reflected light beams are approximately parallel.